

Notice of Allowability

Application No.

09/932,793

Examiner

Sikyin Ip

Applicant(s)

HWA ET AL.

Art Unit

1742

[Handwritten signature]

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8/26/04;9/24/04.
2. ☒ The allowed claim(s) is/are 1,4,6,9 and 11.
3. ☒ The drawings filed on 17 August 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 5/19/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 9/25/04.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Douglas D. Hancock on September 24, 2004.

The application has been amended as follows:

This listing of claims below replaces all prior versions and listings of claims in the application:

1. **(Previously presented)** A solder for use in wave-soldering consisting of:
from 88.5% to 93.2% tin;
from 3.5% to 4.5% silver;
from 2.0% to 6% Indium;
from 0.3% to 1% copper; and
0.01 % phosphorous.
2. (Canceled)
3. (Canceled)
4. **(Previously presented)** A solder according to claim 1 further
consisting of 91.3% tin, 4.2% silver, 4.0% indium, 0.5% copper
and 0.01% phosphorous, and said solder having a
Young's Modulus of 9512 MPa.
5. (Canceled)

6. (Currently Amended) A method of preparing a solder for use in wave-soldering process, said method consisting of the steps of:

(a) mixing tin, silver, indium, copper and phosphorous to form the solder consisting of such that the proportion of tin in the solder is from 88.5% to 93.2% tin; the proportion of silver in the solder is from 3.5% to 4.5% silver; the proportion of indium in the solder is from 2.0% to 6% indium; the proportion of copper in the solder is from 0.3% to 1.0% copper; and the proportion of phosphorous in the solder is 0.01% phosphorous.

7. (Canceled)

8. (Canceled)

9. (Previously presented) A method according to claim 6 which further consists of mixing tin, silver, indium, copper and phosphorous such that:

the proportion of tin in the solder is 91.3%;

the proportion of silver in the solder is 4.2%;

the proportion of indium in the solder is 4%;

the proportion of copper in the solder is 0.5%; and

the proportion of phosphorous is 0.01%.

10. (Canceled)

11. (Currently Amended) A method of soldering, consisting of the steps of:

(a) forming a solder consisting of tin, silver, indium, copper and phosphorous by combining tin, silver, indium, copper and phosphorous in the following proportions:

from 88.5% to 93.2% tin;

from 3.5% to 4.5% silver;

from 2.0% to 6.0% indium;

from 0.3% to 1.0% copper; and

0.01% phosphorous; wherein the solder has a Young's Modulus of 9512

MPa; and

(b) using the solder formed in step (a) to solder in a wave-soldering process;

12 - 16 (Canceled)

The following is an Examiner's Statement of Reasons for Allowance: The instant transitional expression "consisting of" has excluded additional elements from cited references. The references of record do not disclose and teach the claimed solder composition.

Any comments considered necessary by applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably accompany the Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (571) 272-1241. The examiner can normally be reached on Monday to Friday from 5:30 A.M. to 2:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy V. King, can be reached on (571)-272-1244.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


SIKYIN IP
PRIMARY EXAMINER
ART UNIT 1742

S. Ip
September 25, 2004